**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION**

HEADWATER RESEARCH LLC

      Plaintiff,

v.

SAMSUNG ELECTRONICS CO., LTD and
SAMSUNG ELECTRONICS AMERICA, INC.,

      Defendants.

Case No. 2:23-CV-00103-JRG-RSP

<u>**SAMSUNG'S RESPONSIVE CLAIM CONSTRUCTION BRIEF**</u>

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I.   INTRODUCTION

Defendant Samsung responds to Plaintiff Headwater's opening claim construction brief addressing the asserted '733, '117, and '192 Patents.[1] *See* Dkt. No. 94 (hereinafter "Opening Brief"). The patents' common specification discloses alleged improvements in network backend technology applicable to wireless carriers and the like. But over time, Headwater morphed its claims through continuation practice until they bore little resemblance to these disclosed concepts to target mobile device and server technology. This practice injected ambiguity into the ultimately issued claim terms, which prevents a POSITA from being reasonably certain about how to interpret the identified claim terms and phrases considering the claims, specification, and file history.

While Headwater attempts to discredit Dr. Turnbull's declaration[2] as conclusory, it is worth noting that Samsung is the *only* party that submitted expert testimony to establish how a POSITA would have interpreted the claims. Headwater submitted no expert declaration to support its brief.

Regarding Headwater's allegations of "indiscriminate indefiniteness assertions," Samsung notes that, to streamline the disputes before this Court, it withdrew all but seven challenged terms over a month before Headwater filed its claim construction brief. *See* Dkt. No. 91. While challenging seven terms is reasonable given the excessive number of claims asserted,[3] Samsung further streamlines the dispute by withdrawing two additional claim terms: the "at least one of the devices having a network stack . . ." term of Claim 13 of the '117 Patent and the "wherein one of the message delivery triggers . . ." term of Claim 11 of the '192 Patent.

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[1] *See* Dkt. No. 94-2 (U.S. Patent No. 8,406,733); Dkt. No. 94-3 (U.S. Patent No. 9,198,117); Dkt. No. 94-4 (U.S. Patent No. 9,615,192).
[2] *See* Dkt. No. 94-7 ("Turnbull Decl.").
[3] Headwater did not identify *any* terms for construction, suggesting that it has not meaningfully engaged in identifying disputed issues for the Court to resolve at an early stage.

The Court should likewise disregard Headwater's criticism that Samsung submitted "inconsistent positions in IPRs." Because an IPR petition can be based "only on a ground that could be raised under section 102 or 103," a petitioner cannot challenge a claim as indefinite. *See* 35 U.S.C. § 311(b). Courts and the Patent Office both recognize that a claim may be both indefinite and, simultaneously, invalid for lack of novelty over the prior art. *See Intel Corp. v. Qualcomm Inc.*, 21 F.4th 801, 813 (Fed. Cir. 2021) ("The indefiniteness of a limitation [] precludes a patentability determination only when the indefiniteness renders it logically impossible for the Board to reach such a decision."); *Target Corp. v. Proxicom Wireless, LLC*, IPR2020-00904, Paper 11 at 12 (P.T.A.B. Nov. 10, 2020) ("Petitioner's alternative pleading before a district court is common practice, especially where it concerns issues outside the scope of inter partes review.")[4].

II.   SAMSUNG'S OVERVIEW OF THE ASSERTED PATENTS

As discussed in Headwater's opening brief, the asserted patents share a common specification, claim priority to 2009[5], and, at a high level, relate to communications involving mobile devices and servers.

The patents' common specification focuses on a "flattened network architecture" that allegedly would solve the problem of "growing digital networking demand." *See* Dkt. No. 94-2 at 5:62-6:28, 12:25-30. In this architecture, "complex data path network processing" ordinarily handled by edge or core network equipment "are moved into the device." *Id.* at 11:21-35. Doing

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[4] *Available at* https://ptacts.uspto.gov/ptacts/public-informations/petitions/1535781/download-documents?artifactId=bguzNDEgO5jlKgp7xCpXpm2vFUwK0rhjnOaaeixCoQ2QemtDVVwlfA 0.

[5] Headwater's statement that each patent claims priority to "the same February 2009 patent application" is an oversimplification. Each patent claims priority to four provisional applications filed during January and February of 2009 and to a nonprovisional application (U.S. App. No. 12/380,780) filed March 2, 2009. *See* Dkt. No. 94-2; Dkt. No. 94-3; Dkt. No. 94-4.

so allegedly "reduces the need for complex data path protocol interaction between the base station and network infrastructure." *Id.* at 12:30-32.

The specification discloses that this flattened architecture can be implemented using a "virtual network overlay" that includes "a device service processor, a network service controller and a control plane communication link." *Id.* at 11:21-24. As shown in Figure 16, the service processor's "service control device link" and the service controller's "service control server link" communicate through a "service control link" that carries control plane communications. *See id.* at 68:19-37 (describing this link as providing "an efficient and flexible control plane communication link"). These control plane communications are used to "manage various aspects of device based network service policy implementation." *Id.* at 11:21-24.

Through continuation practice, Headwater repeatedly re-wrote claims stemming from this specification in an attempt to shed these core concepts and capture any generic functionality involving device-side applications that communicate with server-side applications through a central server in the middle. It did so by crafting new terminology generally not employed by the specification. The '117 and '192 Patent claim terms bear especially little resemblance to the language employed by the specification. Despite spanning over 160 columns, the specification does not include recited terms like "device messaging agents," "secure Internet data connection," "network message server," "application identifier," "message link server," "device link agent," or "message delivery trigger."

III.   RESPONSE TO HEADWATER'S "OVERVIEW OF ASSERTED PATENTS"

Although not vital to the present claim construction disputes, Samsung notes here two corrections to Headwater's section entitled "Overview of Asserted Patents." *See* Opening Brief at 2-3. First, the '117 Patent is ***not*** "directed to 'mobile-end user devices'" as Headwater asserts. Instead, each claim is directed to a ***network system*** comprising (1) "a plurality of device messaging

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agents" executable on mobile end-user devices and (2) a "network message server." *See, e.g.*, Dkt.

No. 94-3, Claim 1. In other words, a single mobile end-user device, by itself, is not within the

scope of the claims.

Second, while Samsung agrees that the '192 Patent is directed to a "message link server,"

that patent does not claim "send[ing] messages" to components on end-user devices. Instead, the

patent's independent claims involve receiving "network element messages from a plurality of

network elements," buffering content from those messages, and then supplying messages

"comprising the buffered content" to a "transport services stack," which is part of the message link

server itself. *See* Dkt. No. 94-4 at Claims 1, 15. Although the independent claims characterize the

"supplying" step for the purpose of "delivery on the secure message link maintained between the

message link server and a device link agent," they do not claim delivering the message to those

device link agents. *See id.* Only one dependent claim—claim 3—requires transporting messages

to an end-user device's "device link agent." *See id.* at Claim 3.

IV.   LEGAL STANDARD

A patent claim is "invalid for indefiniteness if its language, when read in light of the

specification and the prosecution history, 'fail[s] to inform, with reasonable certainty, those skilled

in the art about the scope of the invention.'" *Interval Licensing LLC v. AOL, Inc.*, 766 F.3d 1364,

1369-70 (Fed. Cir. 2014) (citing *Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898, 901

(2014)). Merely being able to ascribe "some meaning" to a patent's claims is insufficient to satisfy

the definiteness requirement of 35 U.S.C. § 112. *Nautilus*, 572 U.S. at 911 (2014). Further, courts

"should not rewrite claims to preserve validity." *Pfizer, Inc. v. Ranbaxy Labs. Ltd.*, 457 F.3d 1284,

1292 (Fed. Cir. 2006).

"[W]hen a subjective term is used in a claim, the court must determine whether the patent's

specification supplies some standard for measuring the scope of the term [and that] standard must

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provide objective boundaries for those of skill in the art." *Semcon IP Inc. v. Louis Vuitton N. Am., Inc.*, No. 2:19-CV-00122-JRG, 2020 U.S. Dist. LEXIS 87492, at *13-14 (E.D. Tex. May 19, 2020) (internal citations and quotations omitted). Where no such boundaries are present, the claims are indefinite. *Interval Licensing*, 766 F.3d at 1371 ("The claims, when read in light of the specification and the prosecution history, must provide objective boundaries for those of skill in the art."). "Although the specification may aid the court in interpreting the meaning of disputed claim language, particular embodiments and examples appearing in the specification will not generally be read into the claims." *Comark Commc'ns, Inc. v. Harris Corp.*, 156 F.3d 1182, 1187 (Fed. Cir. 1998) (quoting *Constant v. Advanced Micro-Devices, Inc.*, 848 F.2d 1560, 1571 (Fed. Cir. 1988)). Nor is a mere parroting of the subjective claim language in the specification sufficient to provide a POSITA with objective boundaries. *See Datanet LLC v. Dropbox, Inc.*, No. 622-CV-001142-OLG-DTG, 2023 WL 7545234, at *10 (W.D. Tex. Nov. 10, 2023) ("[T]he Court agrees with Dropbox that the passages Datanet cites either essentially repeat the claim language or simply recite that an impact should have 'little or no perceptible impact on system performance' . . . . [These passages fail to] provide a POSITA guidance to determine what is a . . . 'substantially imperceptible impact' [as claimed].") (citations omitted).

V.   **LEVEL OF ORDINARY SKILL IN THE ART**

Samsung submits that a POSITA "would have had (1) at least a bachelor's degree in computer science, electrical engineering, or a related field; and (2) 3-5 years of experience in services and application implementation in communication networks. Additional graduate education could substitute for professional experience, and vice versa." *See* Turnbull Decl. at ¶ 30. Headwater proffered no proposed definition for a POSITA in its briefing. Samsung reserves the right to address any definition offered by Headwater in its reply brief.

VI.   ARGUMENT

A.   '733 Patent Claim Terms

1.   "device agents" (Claims 1, 19, 26, 30)

Headwater's Proposed Construction	Samsung's Proposed Construction
Not indefinite; plain and ordinary meaning	Indefinite

a.   The Phrase "Device Agents" Is Indefinite

A POSITA would not have been able to ascertain the meaning of the term "device agent" in the '733 Patent with reasonable certainty. "Device agent" has no commonly understood meaning in the art. Turnbull Decl. at ¶ 44. Headwater's own extrinsic evidence shows that even in the limited instances where authors use "device agent," the term takes on different meanings depending on the needs and whims of the author. Indeed, each of Headwater's extrinsic evidence uses "device agents" in ways that contradict Headwater's belated construction that "device agent" is an agent in a device.

Headwater argues that the words "device" and "agent" should be separately treated such that if the Court finds definitive meaning in each of these words, then "device agent" must also be definite. Opening Brief at 4. This argument fails.[6] Courts routinely find phrases to be indefinite

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[6] Court's generally reject improper attempts to broaden phrases by considering the meanings of individual words. *See, e.g.*, *Network Com., Inc. v. Microsoft Corp*., 422 F.3d 1353, 1359-60 (Fed. Cir. 2005) (rejecting the patentee's attempt "to combine individual dictionary definitions of 'download' and 'component'" as improper because it would be too broad); *Irdeto Access, Inc. v. Echostar Satellite Corp*., 383 F.3d 1295, 1300 (Fed. Cir. 2004) (refusing to define "group key" by using dictionary definitions for "group" and "key"); *see also Tehrani v. Polar Electro, Inc., No. SACV 051113 DOC FFMX*, 2007 WL 3052717, at *5 (C.D. Cal. Oct. 3, 2007), *aff'd sub nom. Tehrani v. Polar Electro*, 301 F. App'x 959 (Fed. Cir. 2008) ("[S]imply combining the definitions of 'cardiac' and 'function' results in a broad, vague definition that is untenable in light of the specification."); *Align Tech., Inc. v. 3Shape*, No. CV 17-1648-LPS, 2021 WL 2320139, at *12 (D. Del. June 7, 2021) ("Shape's approach of construction by combining ordinary dictionary

despite individual words having accepted industry meaning. *See, e.g.*, *Mantissa Corp. v. First Fin. Corp.*, No. 2022-1963, 2024 WL 607717, at *4 (Fed. Cir. Feb. 14, 2024) (holding "transaction partner" indefinite); *Infinity Computer Prod., Inc. v. Oki Data Americas, Inc.*, 987 F.3d 1053, 1062 (Fed. Cir. 2021) (holding "passive link" indefinite); *IQASR LLC v. Wendt Corp.*, 825 F. App'x 900, 904 (Fed. Cir. 2020) (holding "magnetic fuzz" indefinite); *Cap. Sec. Sys., Inc. v. NCR Corp.*, 725 F. App'x 952, 959 (Fed. Cir. 2018) (holding "transactional operator" indefinite).

Indeed, various "agent" terms such as "intelligent agent," "software agent," and "mobile agent" have been found indefinite by another court in this circuit. *See Joao Control & Monitoring Sys., LLC v. Protect Am., Inc.*, No. 1-14-CV-134-LY, 2015 WL 4937464, at *7–8 (W.D. Tex. Aug. 18, 2015). That the individual terms such as "intelligent," "software," "mobile," and "agent" were known did not save these terms from being found indefinite. *See id.* The same conclusion should apply to the term "device agent" because adding the term "device" does not confer any meaningful bounds to an "agent." In fact, unlike terms such as "software agents" and "mobile agents"—which at least connote a software—the '733 Patent describes that agents may be implemented in hardware, software, or both, rendering the term "device agent" even more indefinite than those in *Joao Control*. *See* Dkt. No. 94-2 at 42:51-54.

The '733 Patent does not provide any guidance to save "device agent" from indefiniteness. Claim 1 includes limitations that dance around the "device agent" but fails to illuminate what a "device agent" actually is. Claim 1 recites that a plurality of device agents are "communicatively coupled to the service control device link agent through an agent communication bus," that each device agent is "identifiable by an associated device agent identifier," and that a "particular" device

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definitions of 'focal' and 'plane' is generally disfavored and, more importantly, is not how a POSA would understand the term at issue here.").

agent receives message content delivered by a "service control device link agent." Dkt. No. 94-2, Claim 1. These generic operations do not inform the boundaries of a "device agent": they leave open the question of whether a "device agent" adopts the meaning of an "agent" and, if so, how the prefix "device" modifies its meaning. Turnbull Decl. at ¶ 35.

The patent specification is similarly not helpful. The specification uses the term "device agent" only a few times, describing its generic function or indicating that a device agent is software. *See, e.g.*, Dkt. No. 94-2 at 15:58-60 ("[T]he service processor 115 includes various components, such as device agents, that perform service policy implementation or management functions."); *id*. at 11:65-66 ("the device agent software"), 160:7-8, 162:34-35, 162:47-48. At best, a POSITA would glean from these disclosures that a device agent performs functions related to service and management, but these abstract disclosures do not meaningfully delineate the bounds of a device agent. Turnbull Decl. at ¶ 36.

> **b.**   **Combining the Individual Meanings of "Device" and "Agent" Does Not Render "Device Agents" Definite**

Even if one were to take the individual meanings of "device" and "agent"—as Headwater argues—doing so does not save "device agent" from indefiniteness. In the context of a computer network, an "agent" means software that performs certain functions on behalf of another element. Turnbull Decl. at ¶ 33; *see, e.g.*, Ex. A (Newton's Telecom Dictionary, 24th ed. (2008)) at 95 (defining "agent" as "software that runs on a client computer for use by administrative software running on a server"); Ex. B (Dictionary of Science and Technology, 2nd ed. (2007)) at 20 (defining "agent" as "a program or piece of software that runs on a workstation in a network, sending performance and statistical information about the workstation to a central network management console"); Ex. C (Dictionary of Computer and Internet Terms, 10th ed. (2009)) at 15 (defining "agent" as software that "performs a service for someone," such as an agent "run[ning]

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on a client computer to keep the server informed of its needs"). A "device agent," on the other hand, is not known in the art, and it is unclear how adding the prefix "device" affects its scope relative to the term "agent." Turnbull Decl. at ¶ 34. Indeed, it is even unclear whether "agent" in the phrase "device agent" should be given its ordinarily understood meaning (software that performs certain functions on behalf of another element).

Headwater belatedly argues that "device agents" are simply agents inside a device. Dkt. No. 94 at 4, 6. But that is not the only way to combine these two words. For example, device agent might also mean an agent for a device (which would also be too generic to satisfy Section 112) that could include an agent not on the device but performs certain functions on behalf of said device. Nothing in the individual words require an interpretation of device agent to reside in the device, which undercuts Headwater's allegation that the combination of "device" and "agent" definitively means "agent inside a device."

Moreover, by construing "device agent" to simply be an agent in a device, Headwater's construction renders "device" meaningless because the claim structure already makes plain that a "device agent" is something comprised in a device. Dkt. No. 94 at 5; *see* Dkt. No. 94-2, Claim 1 (an "end-user device" comprising "a plurality of device agents"). The prefix "device" would be rendered extraneous if all that the "device agent" term meant was an agent in a device. *Becton, Dickinson & Co. v. Tyco Healthcare Grp., LP*, 616 F.3d 1249, 1257 (Fed. Cir. 2010) ("Claims must be interpreted with an eye toward giving effect to all terms in the claim.").

c.   The Specification Fails to Guide the Meaning of the Term

The patent specification further blurs the defining characteristics of "agent" as used in the patent. Figure 16 identifies several black boxes connected to an "Agent Communication Bus." Yet some of these boxes are labeled agents (*e.g.*, billing agent 1695 and access control integrity agent 1694) while other are not (e.g. user interface 1697 and modem driver 1640):

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'733 Patent at Fig. 16

FIG. 16
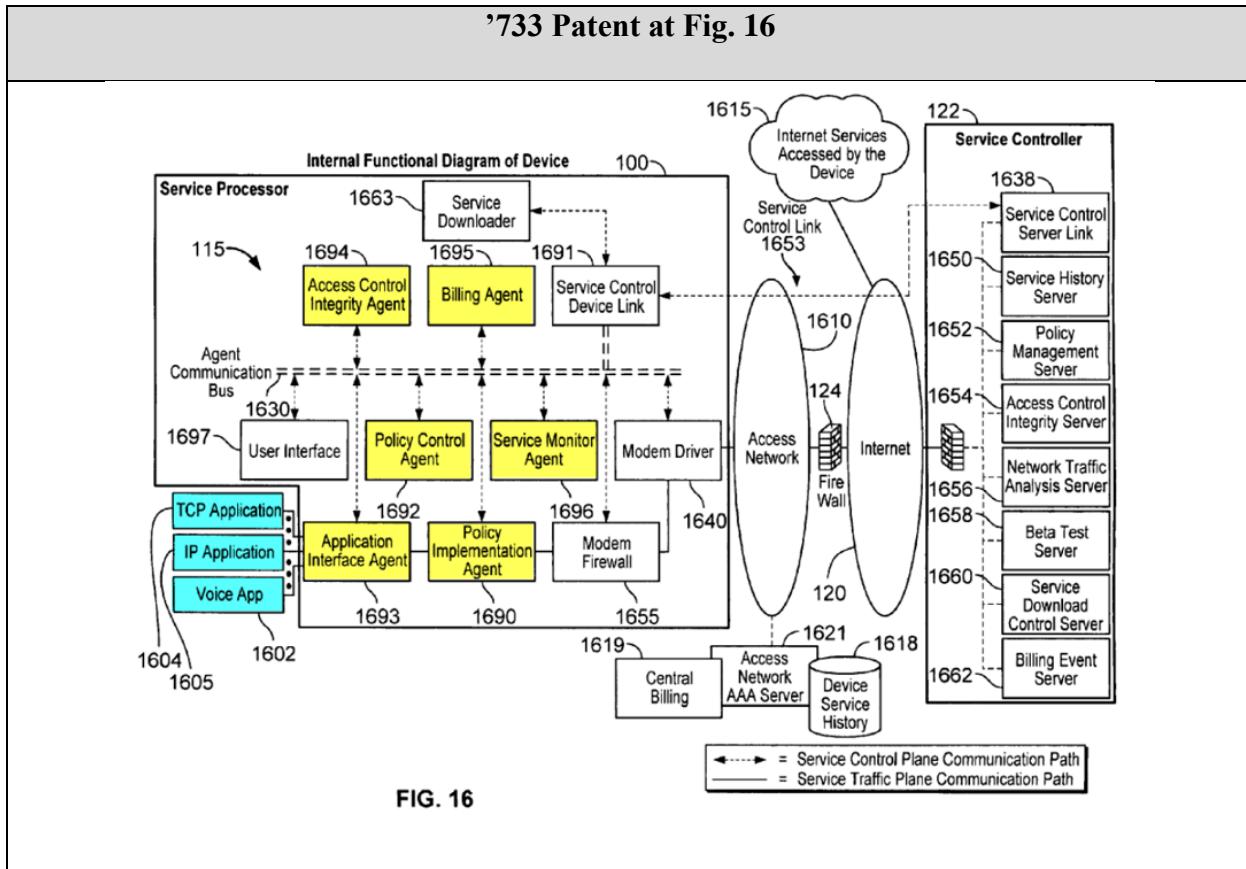
Headwater's own interpretation of "device agent" highlights the ambiguity of the term in the '733 Patent. Headwater's broad construction, as reflected in its infringement allegations, interprets "device agents" to include "applications." *See, e.g.*, Ex. D at 14 (asserting that the accused functionalities "comprise multiple ***device agents*** (e.g., operating system software ***and/or applications***)…") (emphasis added); *see id*. at 17 (same). Headwater alleges that the applications on the accused mobile phones downloaded from application stores are device agents. Such an interpretation, however, directly contradicts the little guidance given in the specification in Figure 16 above, namely that applications or apps are different from "agents" that are inside a device. Figure 16 depicts "agents" (yellow) distinct from the "applications" or "apps" (blue). *See also* Dkt. No. 94-2 at 52:5-9 ("As shown in FIG. 16, the application interface agent 1693 is in communication with various applications, including a TCP application 1604, an IP application

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1605, and a voice application 1602."); *see also id*. at 56:52-53 (same); Turnbull Decl. at ¶¶ 38-40.

The figures show that "device agents"—whatever they may be—cannot be the apps or applications.

Similarly, Figure 29 illustrates various "agents" (yellow) separately from the "apps" (blue):

'733 Patent at Fig. 29
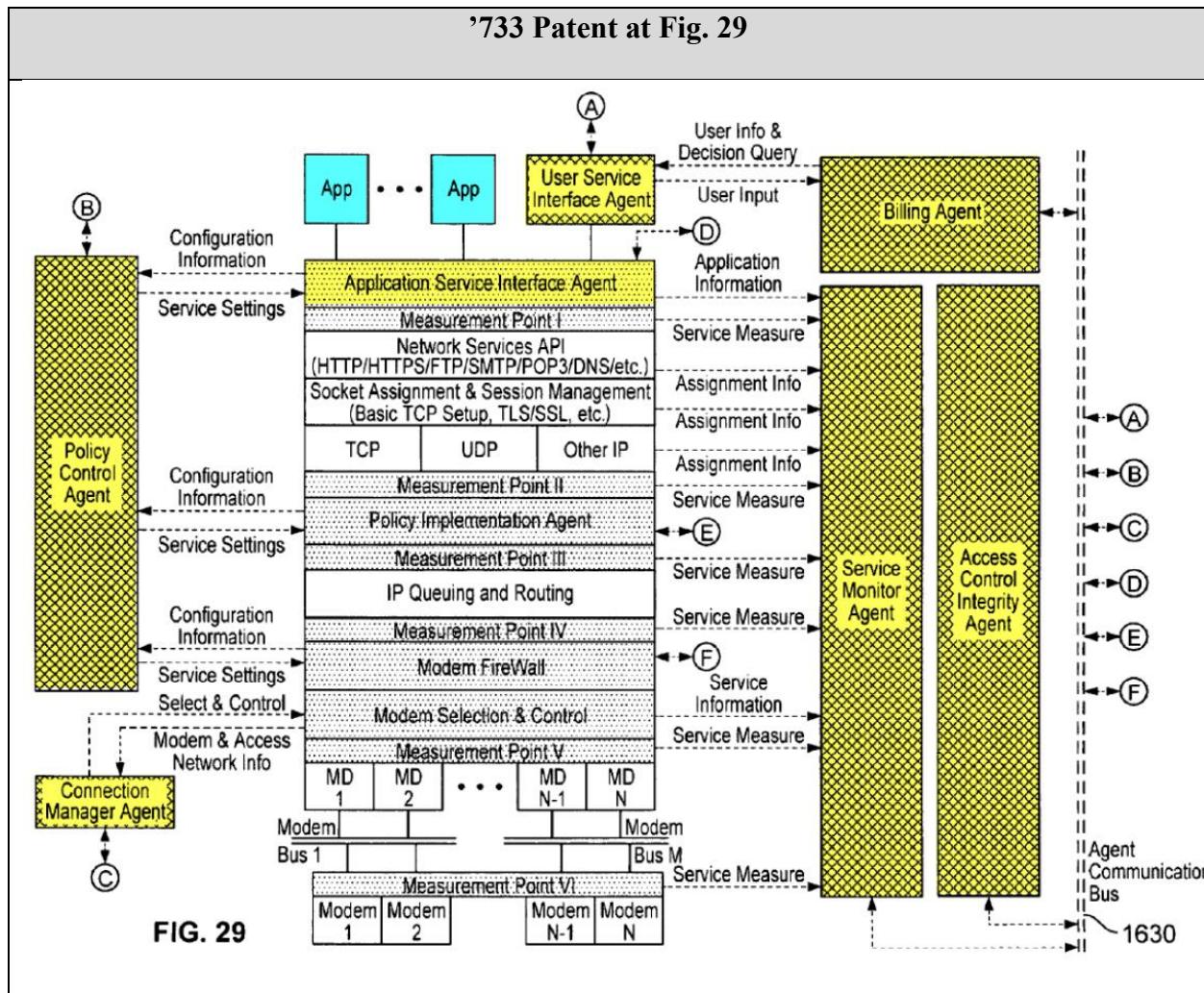
Indeed, voice apps and other applications already existed by the time of the alleged invention, and the named inventor of the '733 Patent undoubtedly knew applications existed in mobile phones because several examples are identified in the specification. *See, e.g.*, Dkt. No. 94-2 at 8:47-50 (identifying mobile application systems like "BREW® (Binary Runtime Environment for Wireless from Qualcomm® Inc.), Symbian OS (from Symbian Software Ltd) and Apple

iPhone 3G App Store (from Apple Inc.)"). Yet the '733 Patent never discloses any applications as "agents," much less "device agents." The '733 Patent even criticizes mobile phone applications because this approach "requires a large amount of unnecessary custom interface development and stifles open market creativity for HTTP, WAP or portal/widget based shopping destinations and experiences." *Id.* at 8:50-52. The "agents" highlighted in yellow above are allegedly new inventions that the inventor "moved into the device" (*id.* at 11:29-35) to enable what the patent calls a "flattened network architecture" (*id.* at 11:56-58).

Patent applicants like Headwater "face powerful incentives to inject ambiguity into their claims" and "defer clarity at all costs," so the law provides a "meaningful definiteness check" against those abuses. *Nautilus*, 572 U.S. at 910 (quotation omitted). This is a textbook case where the definiteness check should be applied. Headwater has exploited the inherent ambiguity of "device agent" to broaden the claims for infringement. In doing, Headwater eviscerates any meaningful bounds on the term beyond mere software on a device. "[A] patent must describe the exact scope of an invention and its manufacture . . . to apprise the public of what is still open to them." *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 373 (1996). Here, Headwater's application of the claims for infringement is irreconcilable with the '733 Patent's specification, and thus renders the claims indefinite. *See Apple, Inc. v. Samsung Elecs. Co.*, 932 F. Supp. 2d 1076, 1084 (N.D. Cal. 2013) ("[T]he test for infringement certainly bears on the test for indefiniteness, since the ultimate inquiry for indefiniteness is whether a person having ordinary skill in the art could tell what is claimed—and therefore, what infringes.").

The Federal Circuit has rejected broad interpretations of phrases based on their individual words when doing so would contradict the specification. *See, e.g.*, *Network Com., Inc. v. Microsoft Corp.*, 422 F.3d 1353, 1359-60 (Fed. Cir. 2005) (rejecting the patentee's construction for

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"download component" that "combine[d] individual dictionary definitions of 'download' and 'component.') ("Under that construction, any part of a system involved in the transfer of data from one computer to another would be a download component. This is not a tenable theory in light of the specification."). At a minimum, even if the Court finds that "device agent" is not indefinite, the Court should reject Headwater's broad construction and construe the claims to exclude applications.

d.   Headwater's Attorney Argument Does Not Undermine Dr. Turnbull's Expert Opinion

Having failed to submit an expert declaration of its own, Headwater resorts to attacking Dr. Turnbull's opinions with attorney argument. It is not incumbent on Dr. Turnbull to find every use of "device agent" in the extrinsic record and dispute its relevance. *See Translogic Tech., Inc. v. Hitachi, Ltd.*, No. CV 99-407 PA, 2004 WL 3203958, at *5 (D. Or. Dec. 7, 2004) (finding expert opinion sound over objection that the expert failed to take into account information the other side thought was crucial and the expert thought was irrelevant). Headwater identifies three pieces of extrinsic evidence[7] but makes no attempt to identify any definitive definition of "device agent" in the extrinsic evidence. Simply because another author uses "device agent" in a different context

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[7] Only one reference—U.S. 2006/0218395—predates the alleged January 2009 priority date. *See* Dkt. No. 94-2 at Related U.S. Application Data; Dkt. No. 94-10. But Headwater failed to disclose the '395 Application in their April 29, 2024 disclosure of extrinsic evidence so the reference should be disregarded. Dkt. 91-1 at 1-2. The other references came after this date and thus have no relevance to how a POSITA might have understood "device agent" at the time of the alleged invention. *See* Dkt. No. 94-11 (published 2023), Dkt. Nos. 94-12, 94-13 (effectively filed 2010). The Court should thus also disregard the other references as irrelevant. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005) ("We have made clear, moreover, that the ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question ***at the time of the invention***, i.e., as of the effective filing date of the patent application.") (emphasis added).

in an unrelated document does not make "device agent" definite here. Headwater cites no case law that shows otherwise.

Not only does Headwater's extrinsic evidence fail to redeem the ambiguity of "device agent" in the '733 Patent, Headwater's extrinsic evidence *teaches against* Headwater's proposed construction for "device agents" that would include applications.

'395 Patent Application titled "Device Agent." First, Headwater does not claim that the '733 Patent adopts the definition of "device agent" from the '395 Application. Headwater merely points to the title of the application without explaining whether the '395 Application supports Headwater's construction of "device agents." It does not.

The '395 Patent Application actually *contradicts* Headwater's proposal that includes an application as a type of "device agent." Figure 2 of the '395 Application (to the right) shows that Device Agent 204 is *separate and distinct* from the Application 202. Figure 2 stands in stark contrast to Headwater's interpretation of "device agents" in its infringement contentions to include applications. To the extent the Court gives any weight to the '395 Application, the '395 Application supports Samsung's position that "device agent" in the '733 Patent cannot include applications.
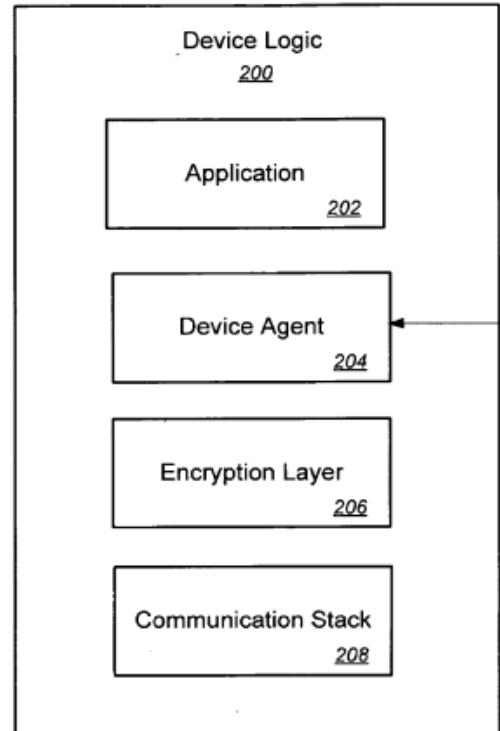
Samsung's EMM Guide.   The EMM Guide also treats "device agents" and applications as separate and distinct. It discusses these two concepts in completely different sections to describe

different things. For example, the EMM Guide discusses "downloading an application from the App Store" in the "Downloading Applications" section on page 98. Ex. F at HW103-00082117. Device agents are only mentioned on pages 2 and 159 in the EMM server module section and Installation Environment File section, respectively. Dkt. No. 94-11; Ex. F at HW103-0082178. To the extent the Court gives any weight to the EMM Guide, it also supports Samsung's position that "device agent" in the '733 Patent cannot include applications.

While Headwater claims this document shows that Samsung's documentation uses "device agents" to mean "agents that are on a device," nowhere does Headwater actually point to any such definition nor establish that the EMM Guide uses "device agent" in the same way as the '733 Patent. Indeed, the EMM Guide does not refer to all device agents as being inside and instead refers to a "Push *Device Agent*" as "Push external components." Ex. F (Samsung EMM Guide) at p. 159.

U.S. Patent No. 9,800,708. Like Headwater's other extrinsic evidence, the '708 Patent also distinguishes between a "device agent" and an application. The '708 Patent shows "device agent 110" in Figure 1 (below) as separate from "interactive service application 140," phone service application 120," and "phone application 220." The '708 Patent states that "device agent 110" "manages a connection between computer 100 and the execution data received from the

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phone service application 120, and delivers the execution data to a phone agent 210 in the mobile terminal 200 in interaction with the phone agent 210 in the mobile terminal 200."

Dkt. No. 94-12 at
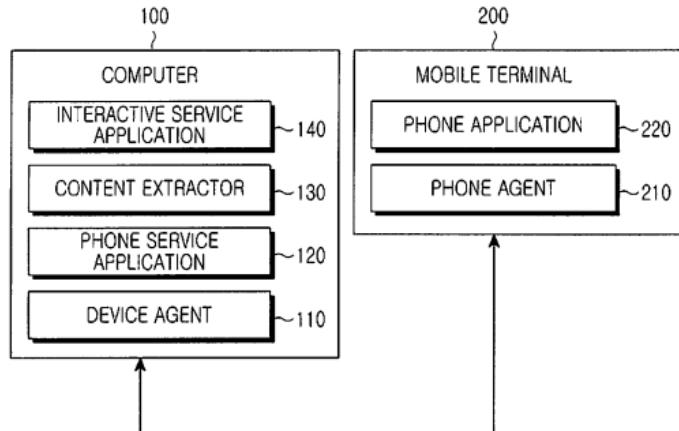
7:24-29. To the extent the Court gives any weight to the '708 Patent, it also supports Samsung's

position that "device agent" in the '733 Patent cannot include applications.

Moreover, the '708 Patent identifies the "device agent" as inside a "computer." If the '708

Patent supported Headwater's reasoning that "device" simply indicated the location of the agent,

the '708 Patent would have called the "device agent" the "computer agent." The fact that it does

not suggests that appending a word like "device" to "agent," depending on the context, could mean

more than just putting the agent in the device.

Accordingly, the Court should find that the term "device agent" is indefinite, or at least be

construed to exclude applications.

> **2.**   **"wherein the particular device agent is configured to assist in presenting a notification through the user interface, the notification based on the message content" (Claim 19)**

Headwater's Proposed Construction	Samsung's Proposed Construction
Not indefinite; plain and ordinary meaning	Indefinite

A POSITA would not have been able to ascertain the meaning of the term "wherein the

particular device agent is configured to assist in presenting a notification through the user interface,

the notification based on the message content" with reasonable certainty.

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First, this term contains "device agent," for which, as discussed above with respect to

Claims 1 and 30, a POSITA would not be able to reasonably ascertain the meaning. Second, and

for similar reasons, a POSITA would not be reasonably certain how to determine whether a "device

agent" is "configured to" (functionality without definite boundaries) "assist in" presenting a

notification. In general, presenting a notification through a user interface was a well-known

functionality that long predates the asserted patents. Turnbull Decl. at ¶ 42. However, it is not

clear how a POSITA would have determined whether a particular component "is configured to

assist" in that presentation. *Id.* Whether something "assists" is a subjective term of degree—one

can argue *any* component of a device is configured to assist *any other* component of that same

device, and how a "device agent" is "configured to assist in presenting a notification through the

user interface" could mean something different to a POSITA based on their particular experiences

or opinions. *See Sonix Tech. Co., Ltd. v. Publ'ns. Int'l., Ltd.*, 844 F.3d 1370, 1378 (Fed. Cir. 2017)

(stating subjective claim terms are those that "turn[] on a person's tastes or opinion."). For

example, if a given component stores or processes information that is ultimately displayed through

a user interface, does it necessarily "assist" in that presentation? What level of involvement is

required for software to cross over from merely handling a notification to being deemed to be

"configured to assist" in its presentation? In many cases, a POSITA would be unable to determine

the criteria for being "configured to assist" in presenting the claimed notification. Indeed, such

terms with relative definitions have been determined to be terms of degree. *See Guangdong Alison

Hi-Tech. Co. v. Int'l Trade Comm'n*, 936 F.3d 1353, 1360 (Fed. Cir. 2019) (finding "lofty …

batting" to be a term of degree); *Liberty Ammunition, Inc. v. United States*, 835 F.3d 1388, 1395-

96 (Fed. Cir. 2016) (finding that "reduced area of contact" is a term of degree because it

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"necessarily calls for a comparison against some baseline," and noting that "[t]erms of degree are problematic if their baseline is unclear to those of ordinary skill in the art").

Because the claim recites a term of degree, it is critical that the claims or specification provide objective boundaries to rescue the claim itself from indefiniteness. *See Interval Licensing LLC v. AOL, Inc.*, 766 F.3d at 1373 (finding indefiniteness due to "facially subjective claim language without an objective boundary"). The '733 Patent, however, fails to inform where these objective boundaries must be drawn. Claim 19 is the only claim—out of thirty claims—in the '733 Patent to discuss the "presenting" of a notification, and it provides no clarity about what being "configured to assist" means. Further, despite its extensive 194-page-long specification, the '733 Patent provides no passages that speak to a "device agent" being "configured to assist" in the process of presenting a notification. *See generally* Dkt. No. 94-2; *see also id.* at 72:19-23 (at best, noting that the device itself can issue a "user interface message" without discussing any device agents). Headwater has not even identified any relevant excerpts from the specification to inform the meaning of this claim limitation. The claims and specification thus provide no objective boundaries as to the meaning of being "configured to assist" in presenting a notification.

Headwater then attempts to circumvent the proper legal inquiry by ignoring portions of the claim limitation and misquoting Dr. Turnbull. First, Headwater's argument that "assist" itself has a readily ascertainable meaning fails to recognize that the claim requires a "device agent" that is "configured to assist" in presenting a notification—the fact that a POSITA may be able to articulate the meaning of "assist" alone does not detract from the fact that a POSITA would be unable to articulate what it means for a "device agent" to be "configured to assist" in presenting a notification. *See* Opening Brief at 9. Second, Headwater takes Dr. Turnbull's testimony out of context. *See id.* In his deposition, Dr. Turnbull merely noted that with *all the source code*, a

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POSITA *had a higher chance* of being able to figure out whether a component assists in that process or not. *See* Dkt. No. 94-8 (hereinafter, "Turnbull Dep. Tr.") at 88:23-89:9. But that is not the analysis for determining whether a claim term is indefinite. The indefiniteness inquiry does not ask whether a POSITA, having all applicable source code available to him or her, is able to determine the metes and bounds of the claim as applied to that code. Instead, a claim is indefinite when the claims and the specification fail to provide objective boundaries for the claim, as explained above. Accordingly, this claim term is indefinite.

Accordingly, a POSITA would not have ascertained with reasonable certainty the scope of the limitation of Claim 19.

B.   '117 Patent Claim Terms

1.   "device messaging agents" (Claims 1, 4, 5, 6, 12, 13, 14, and 18)

Headwater's Proposed Construction	Samsung's Proposed Construction
Not indefinite; plain and ordinary meaning	Indefinite

As discussed above, a POSITA would not be reasonably certain about the scope of "device agent" in the '733 Patent (*see supra* § IV(A)(1)). The addition of "messaging" in the '117 Patent's "device messaging agent" does not render this term any more definite. If anything, it confirms the amorphous and malleable nature of the "device . . . agents" term in general.

Like "device agent," "device messaging agent" is not known in the art. *See* Turnbull Decl. at ¶ 44. The '117 Patent, however, provides even less guidance as to what constitutes a "device messaging agent." Its claims use "device messaging agent" in a manner inconsistent with the way the '733 Patent uses the similar term "device agent"—compounding the ambiguity of both terms. Whereas the '733 Patent's "device agent" functions as the intended destination of messages originating from the network (*see supra* § VI(A)(1)(a) (discussing generic properties of "device

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agents")), the '117 Patent's "device messaging agent" serves a different function—it functions as an intermediary that receives "Internet data messages" from a "network message server" and forwards them to their intended destination (a "software process"). Neither patent explains this seemingly arbitrary substitution of made-up terms. *See also* Turnbull Decl. at ¶ 44. And the specification does not reference a "device messaging agent" even once (outside of the Abstract, amended long after the priority date), rendering this term especially suspect. *See Mantissa Corp.,* 2024 WL 607717, at *3 (finding term "transaction partner" indefinite at least in part because "transaction partner" did not appear in specification).

The file history of a related patent confirms the arbitrary nature of "device messaging agent." The term was first introduced during the prosecution of U.S. App. No. 14/667,353 (which shares the same parent as the application for the '117 Patent and was prosecuted in the same timeframe before the same examiner). Ex. E at SAM-HW-2_00215894. In response to the Examiner's § 112(b) rejection of "device messaging agent" as "not clear from the descriptive portion of the specification in juxtaposition to the drawings," (*id.* at SAM-HW-2_00216136), Headwater cobbled together a theory that the newly claimed "device messaging agent" was a broader version of the disclosed "service control device link" not limited to "just service control," based on the catchall caveat that "the division of functionality between agents is a design choice." *Id.* at SAM-HW-2_00216549-50. However, expanding "device messaging agent" to not be limited to "service control" divorces the term from the only defining characteristic that the specification ascribes to "device agents"—that they be involved in "service policy" or "management" functions. *See* Dkt. No. 94-3 at 11:35-40, 15:58-60; *see also* § VI(A)(1)(a) (discussing corresponding passages in the '733 Patent). This expansion causes confusion about whether "device messaging agents" are in fact a species of "device agents" or something else entirely.

Headwater's brief does not resolve these problems. Headwater primarily contends that the claim structure "provides a POSITA with reasonable certainty as to claim scope" because it confirms "device messaging agents" are "executable on a … mobile end-user device" and "receive the Internet data messages." Opening Brief at 10. As with the '733 Patent's "device agents," however, the fact that the claim already requires that "device messaging agents" are "executable on a . . . mobile end-user device" would render the prefix "device" extraneous if all it meant was that "device messaging agents" must be on a device. *See Becton, Dickinson & Co. v. Tyco Healthcare Grp., LP*, 616 F.3d 1249, 1257 (Fed. Cir. 2010). Likewise, the prefix "messaging" would also be rendered extraneous if all it meant was that "device messaging agents" receive messages. While Headwater also briefly references the Abstract as reciting the phrase four times, the Abstract is irrelevant to understanding how a POSITA could interpret the disputed term at the time of the alleged invention. Opening Brief at 10-11. The Abstract was not part of the original patent application, but instead was drafted years later as a preliminary amendment when the application for the '117 Patent was filed. Just as importantly, the Abstract merely restates the claim language, shedding no additional light on the claim's meaning:

Abstract	Independent Claim 1
"Each of several mobile end-user devices contains a device messaging agent that securely communicates with a network message server over a wireless network."	"a plurality of device messaging agents, each executable on a respective one of a plurality of mobile end-user devices configured to exchange Internet data via a data connection to a wireless network; and" "each secure Internet data connection between the network message server and a respective one of the mobile end-user devices via a device data connection to a wireless network"
"The network message server delivers messages to the device messaging agent on behalf of a plurality of network application servers."	"the network message server configured to receive, from each of a plurality of network application servers, multiple requests to transmit application data,"

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	"the network message server to transmit each of the generated Internet data messages to the device messaging agent located on the device indicated in the corresponding request,"
"The network message server securely passes the data and an application identifier to the device messaging agent on the appropriate mobile end-user device."	"the network message server to generate corresponding Internet data messages based on the requests, each such message containing at least one application identifier for an indicated application and application data corresponding to one of the requests, and" "the network message server to transmit each of the generated Internet data messages to the device messaging agent located on the device indicated in the corresponding request,"
"The device messaging agent maps the application identifier to a software process corresponding to the application, …."	"each device messaging agent, when executing, … to, for each received message, map the application identifier in the message to a software process corresponding to the application identifier,"

Accordingly, the Court should find that the term "device messaging agent" as used in the

'117 Patent is indefinite.

C.   '192 Patent Claim Terms

1.   "software components" (Claims 1, 4, and 15)

Headwater's Proposed Construction	Samsung's Proposed Construction
Not indefinite; plain and ordinary meaning	Indefinite

Although "software components" ordinarily would be a relatively straightforward—albeit

exceptionally generic—phrase, the '192 Patent makes the meaning of "software components"

unclear in light of its disclosures regarding "device agents." Turnbull Decl. at ¶ 49.

The patent primarily uses "software components" to refer to something completely distinct

from "device agents." Claim 1 recites "wireless end-user devices comprising multiple software

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components authorized to receive and process data from secure message link messages received via a device link agent on that device." Dkt. No. 94-4 at 167:12-16. This language indicates that "software components" and "device agents" are distinct, assuming that "device link agents"[8] are examples of "device agents." *See* Turnbull Decl. at ¶¶ 50-51; *see also SimpleAir, Inc. v. Sony Ericsson Mobile Commc'ns. AB*, 820 F.3d 419, 431 (Fed. Cir. 2015) ("Different claim terms are presumed to have different meanings.") (citing *Bd. of Regents of the Univ. of Texas. Sys. v. BENQ Am. Corp.*, 533 F.3d. 1362, 1371 (Fed. Cir. 2008)). Certain specification portions likewise use "software components" to refer to elements that, for whatever reason, do not qualify as agents. *See supra* § VI(A)(1)(a) (identifying components within the device that do not qualify as agents, such as apps, modem firewall, and modem driver); *see* Dkt. No. 94-4 at Fig. 16; *id.* at 43:31-37 ("[T]he session bus can be further protected by storing all software (e.g., software components, applications and/or agents) in secure memory"); *id.* at 92:21-23 (referencing "various agents, components, and/or functions implemented in software and/or hardware.").

If "software components" refers to all software functionalities that do not qualify as "device agents," it necessarily follows that "software components" is indefinite. As discussed above, a POSITA would not be reasonably certain about what would constitute a "device agent." *See supra* § VI(A)(1). For the same reasons, a POSITA would not be reasonably certain about what would ***not*** constitute a "device agent"—i.e., "software components." In other words, if "software components" encompasses everything that a device agent is not, and the bounds of "device agents" are indeterminate, then the bounds of "software components" are also indeterminate.

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[8] "Device link agent" is not used in the patent outside of the Abstract and the claims.

On the other hand, certain specification portions suggest that "device agents" can be implemented as "software components." *See* Turnbull Decl. at ¶ 52. For example, the patent states that "all or substantially all of the service processor 115 functionality," which encompasses "agents" as shown by Fig. 16, can be "implemented and stored in *software* that can be performed on (e.g., executed by) various *components* in device." Dkt. No. 94-4 at 28:23-26 (emphasis added); *id.* at Fig. 16 (depicting both agents and non-agents as residing within service processor 115). Other passages suggest synonymity. *See e.g.*, *id.* at 69:54-56 (referencing "the device agents (e.g., service processor agents/components)"); *id.* at 45:56-60 (referencing "restrictions on which device components or agents the agents will conduct communications with so that only agents that need to communicate with one another can do so").

The term "software components" is thus indefinite for two independent reasons. First, a POSITA would not be reasonably certain whether the term is intended to be mutually exclusive, encompassing, or synonymous with "device agents." Second, assuming that the term is intended to be mutually exclusive of "device agents," its metes and bounds are just as indefinite as "device agents."

Headwater's position that "software components" and "device link agents" "are not exactly the same thing" fails to explain away these ambiguities. Opening Brief at 13. While the claim, read in isolation, supports that position, Headwater fails to account for specification passages that use "software components" to refer to non-agent software running on the device, as discussed above. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1315 (Fed. Cir. 2005) (Claims "must be read in view of the specification, of which they are a part.") (citing *Markman v. Westview Instruments, Inc.*, 52 F.3d 967 (Fed. Cir. 1995) (en banc)); *Kinik Co. v. ITC*, 362 F.3d 1359, 1365 (Fed. Cir.

2004) ("The words of patent claims have the meaning and scope with which they are used in the specification and the prosecution history.").

Accordingly, the term "software components" is indefinite.

> **2.** **"wherein one of the message delivery triggers is the receipt of a particular network element message from one of the network elements" (Claim 13)**

Headwater's Proposed Construction	Samsung's Proposed Construction
Not indefinite; plain and ordinary meaning	Indefinite

This claim limitation is indefinite because a POSITA would not have understood what constitutes a "particular network element message." *See* Turnbull Decl. at ¶¶ 56-58.

Adopting the common dictionary definition of "particular" as being "one unit or element among others" fails to give a POSITA reasonable guidance as to the scope of this term, contrary to Headwater's argument. Opening Brief at 14-15. As Dr. Turnbull testified, a "particular network element message" is one that is "not any network element message, it's a particular type of one or a particular one." Turnbull Dep. Tr. 18:23-25. The claim, however, fails to explain what causes a given network element message to be a "particular network element message." Is a message "particular" because it contains certain content, or because it arrives at a particular time or in a particular manner, as determined by circumstances beyond its control? *See* Turnbull Decl. at ¶ 56. There are many possibilities as to what can make a "network element message" "particular." Indeed, *every* network element message is "particular" (i.e., one among others) in the sense that the claim contemplates receiving multiple network element messages.

The patent sheds no light on this issue. Neither the independent nor dependent claims provide any context for what constitutes a "particular" message that would trigger the message link server's logic to supply messages intended for delivery to a device. Nor does the specification

clarify this term. It states that numerous events can cause "service control server link 1638" to transmit (something) such as a "waiting until a certain amount of service usage or traffic usage has occurred, responding to a service agent message, [or] responding to a service agent request, initiated by one or more servers." Dkt. No. 94-4 at 70:2-13. This passage only injects more ambiguity. Does a message become "particular" once a threshold of "usage" of other messages has occurred? Alternatively, if a "service agent" message or request constitutes a "particular message," how would a POSITA identify whether a given message qualifies as being related to "service agent" and what other sorts of messages qualify as "particular" given that Claim 13 is not limited to "service agent messages"? The patent does not explain. Accordingly, this claim term is indefinite.

VII.   CONCLUSION

For at least the foregoing reasons, Defendants respectfully request that the Court construe the disputed claims as indefinite.

Dated: June 13, 2024   Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that counsel of record who are deemed to have consented to electronic

service are being served on June 13, 2024, with a copy of this document via the Court's CM/ECF.

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